



MACHAKOS UNIVERSITY

University Examinations for 2017/2018 Academic Year

SCHOOL OF AGRICULTURE AND NATURAL RESOURCES MANAGEMENT

DEPARTMENT OF AGRICULTURAL EDUCATION AND EXTENSION

FIRST YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF EDUCATION
(SCIENCE)

KRM 102 FARMING SYSTEMS

DATE: 6/12/2017

TIME: 11.00-1.00 PM

Instructions:

Answer ALL questions in section A and ANY TWO questions in section B

SECTION A: COMPULSORY: (30 MARKS)

QUESTION ONE (30 MARKS)

- a)
 - i) Define farming systems (2 marks)
 - ii) Farming systems are very important in the production of field crops. Using a diagrammatic illustration, briefly describe how farming systems function (8 marks)
 - iii) Explain the classification of farming systems (6 marks)
- b) Describe the Bio-resource concept as used in integrated farming systems (4 marks)
- c)
 - i) Give a case scenario of resource allocation in an integrated farming systems (2 marks)
 - ii) Describe the potential benefits of the scenario mentioned above (2 marks)
- d) You are an extension officer in your sub-county agricultural office. Local farmers come seeking for your assistance on crop selection in order to improve productivity. Describe any **THREE** factors that guide them to select suitable crops (6 marks)

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

QUESTION TWO (20 MARKS)

- a) Giving relevant examples, explain the major criteria of classifying important crops in Kenya (10 marks)
- b) Discuss the key roles played by crop production in the economic development in Kenya (10 marks)

QUESTION THREE (20 MARKS)

- a) Define integrated farming systems (2 marks)
- b) Explain how the principles of farming systems are achieved through the integrated farming systems approach (8 marks)
- c) Using a diagrammatic illustration, discuss the crop-livestock-fish integrated farming system (10 marks)

QUESTION FOUR (20 MARKS)

- a) Describe the principles of organic farming (10 marks)
- b) 'Organic farming is the future for sustainable Agriculture'. Discuss. (10 marks)

QUESTION FIVE (20 MARKS)

Giving relevant examples discuss the crop production systems mainly used in Kenya (20 marks)